# ABSTRACT

A process for generating a performance model from a functional model for a system including a plurality of distributed hardware and software entities that engage to provide a service to at least one user. The process distributes the representative system requests in a finite number of groups and identifies, for each request group, the corresponding execution flow, formalizes the execution flows by a notation that makes it possible to highlight the causal relationships between the different software entities of the system that are involved in the execution flows and the data characterizing the system's resource consumption, develops an intermediate model, and automates the conversion of the developed intermediate model into a performance model.